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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,933	01/15/2004	Thomas W. Lanni	306168 81088	6526

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EXAMINER	
CAVALLARI, DANIEL J	
ART UNIT	PAPER NUMBER
2836	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/758,933	LANNI, THOMAS W.	
	Examiner	Art Unit	
	Daniel Cavallari	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 September 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-7,9,11,13,15-17,19,21-23,25-27 and 29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3,5-7,9,11,13,15-17,19,21-23,25-27 and 29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/17/2006 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1, 3, 5-7, 9, 11, 13, 15-17, 19, 21, 22, 23, 25-27, & 29 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner notes that Doss et al. and Atkinson et al. has been applied again as prior art however the previous rejection has been altered as necessitated by applicant's amendments.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 5, 6, 9, 11, 13, 15, 16, & 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doss et al. (US 6,751,109) in view of Atkinson et al. (US 2005/0127758) in further view of Wu (US 6,628,535).

In regard to Claims 1 & 9

Doss et al. (hereinafter referred to as Doss) teaches:

An adapter device comprising:

- A DC/DC adapter, external to a portable electronic device (battery pack 14, Figure 1), having a power supply (Dc (IN), 16) to receive DC power from an external DC power source and output a regulated DC voltage (DC OUT) to the electronic device (via node N3 while power is supplied, See Column 3, Lines 41-65).

Doss fails to teach:

1. The DC/DC adapter located in an external casing.
2. DC source determination circuitry.
3. Outputting the data signal to the portable device along with the regulated DC voltage.

1. Doss teaches a detachable battery pack (14) and separate electronic circuitry (12) (See figure 1) but fails to explicitly teach the battery pack located in a casing.

Wu teaches a power adapter comprising a casing for the electrical components (See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the housing taught by Wu with the adapter (12) of Doss who is silent in regard to a particular casing. The motivation would have been to protect the components and protect the user from exposed electrical components.

2. Atkinson et al. (Hereinafter referred to as Atkinson) teaches DC source determination circuitry comprising:

- Source determination circuitry (115) to receive the DC power from the DC power source (127) and compare a magnitude of a voltage of the DC power with a reference magnitude of a reference voltage (117) with comparator (115) (See Figure 1 & Paragraph 10) in order to determine what type of external DC power source is supplying DC power (See Paragraphs 10-13).
- Wherein when the magnitude of the voltage of the DC power is greater than a reference magnitude, a data signal having a first value indicative of the external DC power source being an airplane power source is output (via line 131) and when the magnitude of the voltage of the DC power is les than the reference magnitude, the data signal has a second value indicative of the external DC power source being an automobile power source is output (See Figure 1 & Paragraphs 10-13).

- The data signal being selected from the group consisting of a transmission of a discrete bit, a transmission of a data signal having multiple bits, an analog signal and an analog voltage (read on by the output of the comparator).

[The examiner further notes that Table 1 shows three "regions" 150, 152, & 154 in which region 154 represents the source being from a building (ie. AC), region 152 is indicative of airplane power, and region 154 is indicative of a vehicle battery].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the DC source determination circuitry taught by Atkinson with the adapter taught by Doss in which the DC source determination circuitry was connected at the input of Doss to determine the source of DC voltage and control the charging of the battery (36, See Doss Figure 1). The motivation would have been to prevent from exceeding the power limit from the source as when operating from an airplane source (See Atkinson, Paragraph 8).

3. Doss teaches outputting a sensing signal via line 46 (Figure 1) to the portable electronic device and Atkinson teaches the sensing and control circuitry as an integrated component with the portable electronic device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the comparator in the adapter (12) of Doss (as suggested by Doss via line 46) outputting the data signal and DC voltage to the portable electronic device (14) since it has been

held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70.*

Doss further teaches:

In regard to Claim 3 & 13

- The magnitude of the DC power in a range between about 11.0 Volts and about 14.1 Volts [The examiner notes that Doss teaches a DC input ranging from 5 to 15 Volts (See Column 2, Lines 51-67).

In regard to Claim 5 & 15

- The magnitude of the DC power in a range between about 14.5 Volts and about 15.5 Volts [The examiner notes that Doss teaches a DC input ranging from 5 to 15 Volts (See Column 2, Lines 51-67).

In regard to Claim 6 & 16

- The adapter further including an AC/DC adapter (12, See Figure 1), to receive AC input power and convert the AC input power to an additional DC power signal (in which the additional DC power signal is supplied to the circuit 34, See Figure 1).

In regard to Claims 11 & 19

Doss teaches:

- Receiving DC power from a DC power source (16, See Figure 1), at an adapter (12), and output a regulated DC voltage (N3) from the adapter to an electronic device (14) (See Figure 1).

Doss fails to teach:

1. The DC/DC adapter located in an external casing.
2. DC source determination circuitry.
3. Outputting the data signal to the portable device along with the regulated DC voltage.

1. Doss teaches a detachable battery pack (14) and separate electronic circuitry (12) (See figure 1) but fails to explicitly teach the battery pack located in a casing.

Wu teaches a power adapter comprising a casing for the electrical components (See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the housing taught by Wu with the adapter (12) of Doss who is silent in regard to a particular casing. The motivation would have been to protect the components and protect the user from exposed electrical components.

2. Atkinson et al. (Hereinafter referred to as Atkinson) teaches DC source determination circuitry comprising:

- Comparing a magnitude of a voltage of the DC power with a reference magnitude of a reference voltage (117) with comparator (115) (See Figure 1 & Paragraph 10) in order to determine what type of external DC power source is supplying DC power (See Paragraphs 10-13).
- Outputting a data signal having a first value indicative of the external DC power source being an airplane power source is output (via line 131) and when the magnitude of the voltage of the DC power is les than the reference magnitude, the data signal has a second value indicative of the external DC power source being an automobile power source is output (See Figure 1 & Paragraphs 10-13).
- The data signal being selected from the group consisting of a transmission of a discrete bit, a transmission of a data signal having multiple bits, an analog signal and an analog voltage (read on by the output of the comparator).

[The examiner further notes that Table 1 shows three "regions" 150, 152, & 154 in which region 154 represents the source being from a building (ie. AC), region 152 is indicative of airplane power, and region 154 is indicative of a vehicle battery].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the DC source determination circuitry taught by Atkinson with the adapter taught by Doss in which the DC source determination circuitry was connected at the input of Doss to determine the source of DC voltage and control

the charging of the battery (36, See Doss Figure 1). The motivation would have been to prevent from exceeding the power limit from the source as when operating from an airplane source (See Atkinson, Paragraph 8).

3. Doss teaches outputting a sensing signal via line 46 (Figure 1) to the portable electronic device and Atkinson teaches the sensing and control circuitry as an integrated component with the portable electronic device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the comparator in the adapter (12) of Doss (as suggested by Doss via line 46) outputting the data signal and DC voltage to the portable electronic device (14) since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70.*

Claims 21, 22, 23, 25, 26, & 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doss et al. (US 6,751,109) in view of Atkinson et al. (US 2005/0127758).

In regard to Claims 21

An adapter device comprising:

- A DC/DC adapter, external to a portable electronic device (battery pack 14, Figure 1), having a power supply (DC (IN), 16) to receive DC power from an external DC power source and output a regulated DC voltage (DC OUT) to the

electronic device (via node N3 while power is supplied, See Column 3, Lines 41-65).

Doss fails to teach:

1. DC source determination circuitry.
2. Outputting the data signal to the portable device along with the regulated DC voltage.

1. Atkinson et al. (Hereinafter referred to as Atkinson) teaches DC source determination circuitry comprising:

- DC source determination circuitry (115) to receive the DC power from the DC power source (127) and compare a magnitude of a voltage of the DC power with a reference magnitude of a reference voltage (117) with comparator (115) (See Figure 1 & Paragraph 10) in order to determine what type of external DC power source is supplying DC power (See Paragraphs 10-13).
- Wherein when the magnitude of the voltage of the DC power is greater than a reference magnitude, a data signal having a first value indicative of the external DC power source being an airplane power source is output (via line 131) and when the magnitude of the voltage of the DC power is les than the reference magnitude, the data signal has a second value indicative of the external DC power source being an automobile power source is output (See Figure 1 & Paragraphs 10-13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the DC source determination circuitry taught by Atkinson with the adapter taught by Doss in which the DC source determination circuitry was connected at the input of Doss to determine the source of DC voltage and control the charging of the battery (36, See Doss Figure 1). The motivation would have been to prevent from exceeding the power limit from the source as when operating from an airplane source (See Atkinson, Paragraph 8).

2. Doss teaches outputting a sensing signal via line 46 (Figure 1) to the portable electronic device and Atkinson teaches the sensing and control circuitry as an integrated component with the portable electronic device. It would have been obvious to one having ordinary skill in the art at the time the invention was made to locate the comparator in the adapter (12) of Doss (as suggested by Doss via line 46) outputting the data signal and DC voltage to the portable electronic device (14) since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70.*

Doss further teaches:

In regard to Claim 26

- The adapter further including an AC to DC adapter (26) to receive power and convert the AC input power to an additional DC power signal (See Figure 1).

Atkinson further teaches as part of the DC determination circuitry:

In regard to Claim 22

- When the data signal has the first value, the electronic device operates in a first mode (battery not charging) and when the data signal has the second value, the battery charging circuitry (110) is enabled (See Figure 1 & Paragraph 17).

In regard to Claims 23

- The magnitude of the DC power being in a range between about 11.0 Volts and about 15.5 Volts (See Figure 2 & Paragraphs 11-13) [The examiner notes that Atkinson teaches a range of 14.5-15.5V].

In regard to Claim 25

- The magnitude of the DC power in a range between about 14.5 Volts and about 15.5 Volts (See Figure 2 & Paragraphs 11-13) [The examiner notes that Atkinson teaches a range of 14.5-15.5V].

In regard to Claim 29

- The data signal being selected from the group consisting of a transmission of a discrete bit, a transmission of a data signal having multiple bits, an analog signal and an analog voltage (read on by the output of the comparator).

Claims 1, 7, 11, & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. in view of Doss et al in further view of Massey et al. (US 2004/0075419) in further view of Wu.

Atkinson teaches DC source determination circuitry comprising:

- Source determination circuitry (115) to receive the DC power from the DC power source (127) and compare a magnitude of a voltage of the DC power with a reference magnitude of a reference voltage (117) with comparator (115) (See Figure 1 & Paragraph 10) in order to determine what type of external DC power source is supplying DC power (See Paragraphs 10-13).
- Wherein when the magnitude of the voltage of the DC power is greater than a reference magnitude, a data signal having a first value indicative of the external DC power source being an airplane power source is output (via line 131) and when the magnitude of the voltage of the DC power is les than the reference magnitude, the data signal has a second value indicative of the external DC power source being an automobile power source is output (See Figure 1 & Paragraphs 10-13).
- The data signal being selected from the group consisting of a transmission of a discrete bit, a transmission of a data signal having multiple bits, an analog signal and an analog voltage (read on by the output of the comparator).
- Outputting a data signal (130, 131) and power (via 123) to a portable computer (See Paragraph 8).

[The examiner further notes that Table 1 shows three "regions" 150, 152, & 154 in which region 154 represents the source being from a building (ie. AC), region 152 is indicative of airplane power, and region 154 is indicative of a vehicle battery].

Atkinson fails to teach A DC/DC adapter located in an external casing to a portable electronic device. Atkinson teaches power converter circuitry and logic circuitry (122, 123, 114, & 115) but fails to teach the use of a DC/DC regulator.

Doss teaches the use of a DC/DC regulator (30) used to regulate power to the output on the DC line (See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the DC/DC regulator taught by Doss on the DC OUT line (123) of Atkinson seeing as Atkinson teaches the use of a variety of DC inputs with varying DC outputs yet fails to teach how the device at the output would operate at these different levels (See Atkinson, Paragraph 11). Therefore, it would be beneficial to regulate the DC output on this line to a particular level so that the device could receive one voltage input regardless of the input into the adapter.

Atkinson fails to explicitly teach the logic circuitry (114 & 115) and power conversion circuitry (122) physically separated from the electronic device and is silent in regard to the physical structure of the components but does teach the device being a portable computer (See Paragraph 8).

Massey et al. (hereinafter referred to as Massey) teaches power conversion circuitry (210) and logic circuitry (R2) located external to a portable computer (See Figure 1 & Paragraphs 2 & 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the converter circuitry and logic taught by Atkinson separate from the electronic device who is silent in regard to the physical construction of the power system since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179* and also since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70.*

Atkinson et al. fails to teach the power converter circuitry and logic located in an external casing.

Wu teaches a power adapter comprising a casing for the electrical components (See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the housing taught by Wu with the adapter (12) with the converter circuitry and logic taught by Atkinson. The motivation would have been to protect the components and protect the user from exposed electrical components. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the converter circuitry and logic taught by Atkinson separate from the electronic device who is silent in regard to the physical construction of

the power system since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179* and also since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70.*

Claims 21 & 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. in view of Doss et al in further view of Massey et al. (US 2004/0075419).

Atkinson teaches DC source determination circuitry comprising:

- Source determination circuitry (115) to receive the DC power from the DC power source (127) and compare a magnitude of a voltage of the DC power with a reference magnitude of a reference voltage (117) with comparator (115) (See Figure 1 & Paragraph 10) in order to determine what type of external DC power source is supplying DC power (See Paragraphs 10-13).
- Wherein when the magnitude of the voltage of the DC power is greater than a reference magnitude, a data signal having a first value indicative of the external DC power source being an airplane power source is output (via line 131) and when the magnitude of the voltage of the DC power is les than the reference magnitude, the data signal has a second value indicative of the external DC power source being an automobile power source is output (See Figure 1 & Paragraphs 10-13).

- The data signal being selected from the group consisting of a transmission of a discrete bit, a transmission of a data signal having multiple bits, an analog signal and an analog voltage (read on by the output of the comparator).
- Outputting a data signal (130, 131) and power (via 123) to a portable computer (See Paragraph 8).

[The examiner further notes that Table 1 shows three "regions" 150, 152, & 154 in which region 154 represents the source being from a building (ie. AC), region 152 is indicative of airplane power, and region 154 is indicative of a vehicle battery].

Atkinson fails to teach A DC/DC adapter located in an external casing to a portable electronic device. Atkinson teaches power converter circuitry and logic circuitry (122, 123, 114, & 115) but fails to teach the use of a DC/DC regulator.

Doss teaches the use of a DC/DC regulator (30) used to regulate power to the output on the DC line (See Figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the DC/DC regulator taught by Doss on the DC OUT line (123) of Atkinson seeing as Atkinson teaches the use of a variety of DC inputs with varying DC outputs yet fails to teach how the device at the output would operate at these different levels (See Atkinson, Paragraph 11). Therefore, it would be beneficial to regulate the DC output on this line to a particular level so that the device could receive one voltage input regardless of the input into the adapter.

Atkinson fails to explicitly teach the logic circuitry (114 & 115) and power conversion circuitry (122) physically separated from the electronic device and is silent in regard to the physical structure of the components but does teach the device being a portable computer (See Paragraph 8).

Massey et al. (hereinafter referred to as Massey) teaches power conversion circuitry (210) and logic circuitry (R2) located external to a portable computer (See Figure 1 & Paragraphs 2 & 11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the converter circuitry and logic taught by Atkinson separate from the electronic device who is silent in regard to the physical construction of the power system since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman, 168 USPQ 177, 179* and also since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse, 86 USPQ 70.*

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Cavallari whose telephone number is 571-272-8541. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2800 x36. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel Cavallari

November 26, 2007

12/9/07

MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER